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ABSTRACT

The convergence of several lines of psycholinguistic and sociolinguistic research suggests possible explanations for age-related influences on language acquisition. These factors, which include cognitive development, sociocultural context, affective factors, and language input, can be helpful to language educators. By being alert to the cognitive variables active in children entering the classroom, educators can base instruction on what the individual learners are ready to accomplish. The experiences that a child has with language at home and in the community may influence later success in school and may be age-related. Mastery of different kinds of language use, or elaborated code, facilitates both language acquisition and academic achievement in general. Affective factors such as motivation, anxiety, self-confidence, and other individual characteristics are seen by some as partially responsible for the differences between adult and child language acquisition. Finally, the nature of language samples presented to the learner as input for the acquisition process is a significant, age-related factor, since older learners receive less simplified input than do children and must develop skills in gaining needed linguistic information. Teachers following research in these areas are more likely to devise language teaching systems sensitive to the needs and potential of individual learners. (MSE)

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AGE-RELATED FACTORS IN SECOND LANGUAGE ACQUISITION

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INTRODUCTION

Substantial interest surrounds the question of how age affects second language acquisition. This is a particularly intriguing question for educators who must develop appropriate curricula and instructional strategies for refugee and immigrant children of different ages who are entering our schools. Unfortunately, too little is known about language acquisition in general to allow us to say definitively that X or Y makes acquisition easy at one age or difficult at another. However, the convergence of several lines of psycholinguistic and sociolinguistic theory and research suggest possible explanations for age-related influences on language acquisition that language educators should take into account. The purpose of this discussion is to focus on several variables that have been shown to be age-sensitive in the process of second language acquisition.

A word of caution is necessary at the outset: generalizations about the relationship of age and language acquisition are treacherous for two obvious reasons. First, people of the same age do not share all the same characteristics. We can speak of a typical six-year-old or an average fifteen-year-old, but we have to keep in mind that a norm or an ideal may be as much fiction as fact in the real world. Among people of the same age, differences in attitudes, aptitudes, knowledge, and skills make sweeping generalizations about learners elusive. Second, there is no uniform pattern of development that everyone follows. Even if we could say that everyone eventually achieves certain characteristics, it is clear that there is no common route to be followed. Knowledge and skill are acquired by each of us according to a highly individual map.

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COGNITIVE DEVELOPMENT

Piaget has shown how human cognitive development is achieved through maturational stages, with our thought processes and patterns changing systematically as we age. He has also influenced the way we understand the stages of language development as part of more complex cognitive development. For example, Piaget (1923) distinguished between "egocentric" and "socialized" speech in children. When he watched five- and six-year-olds working and playing together, he noticed that their communication often resembled monologues. The children talked, but without much notice of who was listening. They would answer their own questions without waiting for someone else to answer, and often several children would talk simultaneously in what Piaget called "collective monologues."

Children seem unable to engage in sustained socialized speech until they move out of what Piaget calls the preoperational stage of cognitive development and into the concrete operational stage. This shift, which normally occurs around age six or seven, finds children outgrowing their inability to focus on more than a single aspect of a situation, or a single point of view, and beginning to consider relationships. At that point they begin to consider the need to communicate differently with different audiences -- to take the listener's point of view into account.

Given this pattern in child language development, it should not be surprising that educators have greater success redirecting the language behavior of 8- to 12-year-olds than 4- to 7-year-olds (Collier, 1987). Although this younger group has no trouble learning a second language in natural settings, they do seem to be slower to respond to formal language instruction in school than older learners are. It can be expected that as they move into the stage of cognitive development that permits socialized speech, their openness to educational intervention will increase.

Around this same age, middle childhood, children develop a conscious awareness of language that allows them to think about it, judge it, and manipulate it much as adults do. This new awareness of language corresponds to a general cognitive "decentering" (Flavell, 1977) that children experience as they begin to step back and reflect on situations rather than just on themselves. Conscious awareness of language makes it possible for children to think about the appropriateness of what they and others say and to segment language into units -- a necessary step for learning to read. The onset of this awareness, coinciding with other advances in cognitive

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development, appears to be at least partly responsible for the boundary that researchers have found between early childhood and middle childhood for purposes of school language acquisition. Instructional strategies which are popular in formal classroom settings are more likely to fit the cognitive abilities of older children, creating an advantage in rate of acquisition for older children over younger ones.

A similar developmental boundary occurs around the time of adolescence, when the "formal operations" stage of cognitive development begins, allowing a kind of abstract thinking not tied to experience with concrete objects. At this stage, new concepts normally derive from verbal rather than concrete experience (Ausubel and Ausubel, 1971, p. 66). The ability to manipulate abstract linguistic categories and to formalize rules and concepts is an additional aid for language acquisition. This advantage, related to conscious language learning and not natural language acquisition (Krashen, 1977), helps explain the initial advantage for older learners that many researchers have found. Because of their conscious awareness of language and ability to formalize linguistic rules, older learners can outperform younger learners in the early stages of language acquisition, especially in production tasks (speaking and writing). This advantage for older learners often flip-flops as the natural acquisition strategies of younger learners become more powerful. Only when conscious knowledge is called for, as in monitoring tasks that require grammatical analyses (Krashen, 1977, 1977a, 1978), do older learners keep a long-term advantage over younger learners.

The relationship of language acquisition to cognitive development may be one source, then, of the "age differences" researchers have found among language learners. By being alert to the cognitive variables active in the children who enter any classroom, educators can base instruction on what the individual learners are ready to accomplish.

SOCIOCULTURAL CONTEXT

The previous discussion of cognitive factors focuses on the natural, innately-determined blossoming of cognitive and linguistic capabilities that all normal children experience. Looking at the sociocultural context of language acquisition, however, one can find evidence that a child's environment nurtures and shapes his or her ability to use language. Specifically, the experiences a child has with language at home and in the community may have a lot to do with later success in school and may be age-related. In this section, some aspects of this sociocultural influence will be analyzed in an attempt to further clarify sources of age-related variance in language acquisition.

Shirley Brice Heath, an ethnographer at Stanford University, makes the following observation about schooling and language development:

> Strangely enough, though the common expectation is that the school prepares the young for life in the "real world" gradually and with compassion, school personnel rarely recognize that some fundamental notions that lie behind the language arts curriculum represent harsh demands for language minority children. Not only is there the general expectation that all children will learn to speak English, but also the assumption that they have internalized before they start to school the norms of language used in academic life (Heath, 1986, p. 148).

Heath summarizes six uses of language that schools normally expect children to have mastered before schooling begins:

1. Use of language to label and describe the objects, events, and information that non-intimates present them ("Can anyone tell me today's date?");

2. Use of language to recount or recast past events or information shared with or given by non-intimates in a predictable order and format ("Where have we heard this term before?");

3. Following directions from oral and written sources without needing sustained personal reinforcement from adults or peers ("Let's get ready for lunch.");

4. Use of language to sustain and maintain the social interactions of the group ("If you want to use the scissors, Jenny, ask Tammy politely.");

5. Use of language to obtain information from non-intimates ("Why didn't you ask?");

6. Use of language on appropriate occasions to account for one's unique experiences, to link these to generally known ideas or events, and to create new information or to integrate ideas in innovative ways ("My uncle has geese on his farm; I could bring some feathers" - said in a science discussion of the effects of goose down.) (Heath, 1986, p. 148).

The ability to use language in these ways is arguably a prerequisite to success in school, but it is not explicitly taught in school. Some children develop this ability at home and bring it

to school; others -- but not all others -- intuit it in school from models presented by teachers, textbooks, and peers. This is an important point because it can easily be assumed that the difference between a five-year-old who cannot do the things with language that Heath has listed and an eight-year-old who can do these things is simply schooling: exposure to and practice with decontextualized language, not linked to the here-and-now.

Some theorists (for example, Cummins, 1981) argue that schooling an immigrant child in his or her native language for a few years will allow the child to develop language-for-school skills that can be transferred to a second language. Unfortunately, this view can be misinterpreted to mean that being in school at the right age is by itself productive for developing language skills for school. If this were the case, the success of compensatory education would be easier to achieve than it is.

British sociolinguist Basil Bernstein (1982) is less optimistic than Cummins about the "automatic" benefits of schooling for language development. He points to the mismatch between teachers' expectations and students' backgrounds as a cause of many students' failure in schools, especially big city schools. The teachers, as well as the school systems they function in, devalue the patterns of language use which are common in many language minority homes and in American working class families, but these patterns are not always successfully replaced.

For more than 25 years, Bernstein has been developing a theory of language use based on the dichotomy of "restricted" and "elaborated" codes. (The dichotomy is roughly equivalent to Cummins' [1984] distinction between "context-embedded" and "context-reduced" language.) Speakers of an elaborated code will choose from a wider range of syntactic possibilities to convey a message than will speakers of a restricted code (Bernstein, 1982). They will also make more lexical distinctions and put more of their intent into words. A restricted code relies on "gestures, intonations, and verbal metaphor" to express many meanings that could be verbalized, particularly attitudes toward the addressee such as respect and familiarity (Bernstein, 1982, p. 467). Restricted-code discourse is not fully intelligible to audiences who do not share the speaker's cultural background (home, ethnic identity, intellectual interests). This is not the case with elaborated-code messages, where verbal means are more fully employed to make the message explicit and clear to any audience. A major function of schools is to give students familiarity and practice with the use of an elaborated code for both learning and self-expression.

Bernstein traces code preference to cultural and subcultural patterns:

> "A restricted code will arise where the form of the social relation is based upon closely shared identifications, upon an extensive range of shared expectations, upon a range of common assumptions. Thus a restricted code emerges where the culture or subculture raises the 'we' above 'I'.... An elaborated code will arise wherever the culture or subculture emphasizes the "I" over the 'we'" (Bernstein, 1982, p. 476).

How might code preference be age-related and affect the course of language acquisition? Collier (1987) found that among her subjects, who were 5- to 15-year-old immigrants, 8- to 11-year-olds outperformed 5- to 7-year-olds and 12- to 15-year-olds in acquiring English. If her subjects represented the Asian and Hispanic groups that most immigrant children are part of, it is likely that their families and peers usually used a restricted code, rather than an elaborated one. If this is so, it follows that 4- to 7-year-old immigrant children, just venturing into a new culture, just beginning school, and just starting to learn English, would be unlikely to produce elaborated-code utterances in a relatively unfamiliar language. Similarly, Collier's 12- to 15-year-olds were in that sensitive adolescent period in which even language majority children retreat into restricted code usage whenever possible, even to the exclusion of their parents. Comparatively poor performance by these children in an elaborated English code should be no surprise.

In summary, it cannot be assumed that older learners who perform better than younger learners in school are doing so because they have been in school longer. Unless schools can break through code-preference barriers with immigrants more successfully than they have with other language minority students, including working-class whites, other sources will continue to be needed to support the schools' efforts to facilitate language acquisition and academic achievement. However, when teachers can guide language minority students toward more elaborated code usage, these students will reap the same benefit as language majority students do who shift from restricted to elaborated code: they will succeed in school. Effective schools have curricula and teachers who are sensitive to this need.

AFFECTIVE FACTORS

The two previous sections have analyzed two possible sources of age-related variance in language acquisition: cognitive development and

sociocultural context. Both sources are linked to age, but no one can assume that certain things are automatically happening in a learner's cognitive or sociocultural development just because a certain age has been reached.

The same is true for two additional variables often linked to age: affective factors and language input. Affective factors include motivation, anxiety, self-confidence and other characteristics that might affect a person's attitude toward learning. These factors have been hypothesized to be partially responsible for the differences between children and adults in language acquisition (see Schumann, 1975). Their relationship to age as a predictor of overall language learning success is not clear, but some relationship is evident. Older learners, for example, are more likely to feel the need to learn a language for economic survival (adults) or for academic success (adolescents) and thus work harder in school. Such motivation would be absent from young children, and this absence might account for their slower language acquisition in school. On the other hand, even though young learners may lack such extrinsic motivation, they might succeed as they do in natural acquisition settings because of their intrinsic motivation to participate fully with their peers (Gardner and Lambert, 1972).

Ease in acquiring a second language has also been linked to a low level of anxiety. (See Dulay, Burt, and Krashen, 1982, pp. 52-53.) The anxiety barrier might explain why older learners, including adolescents like those in Collier's (1987) study, are less successful at school language acquisition than middle-childhood learners are. Self-conscious teenagers' fear of failing or looking and sounding foolish may create an affective filter that blocks performance of which they would be capable in a relaxed state.

Self-confidence may also work as a filter or barrier. Older learners from many language minority backgrounds stand to perform with more self-confidence than younger learners in a language class because of the extent to which age influences their assertiveness in the face of authority. In spite of their lower anxiety, younger learners from restricted-code backgrounds may be less likely to project their own identity and try a more elaborated code than older learners are, who have had to learn to do so for banking, shopping, and other community involvements. This hesitancy on the part of young restricted-code users to assert "I" over "we," as Bernstein points out, does not improve one's chance for success in an American school.

LANGUAGE INPUT

A final source of variance in language acquisition to be discussed here as age-related is the nature of the language samples themselves which are presented to the learner as input for the acquisition process. Harley (1986) reviews a number of input studies in her analysis of age in second language acquisition and cites Krashen's assertion that "natural comprehensible input has become 'the fundamental principle' in second language acquisition" (Krashen, 1981, p. 8). Krashen believes that the ability to obtain comprehensible input may increase with age, giving older learners an advantage over younger ones. People who talk with very young children automatically simplify input and use concrete language, common to restricted codes. Older learners may receive less help and may have to intervene on their own behalf to clarify the input. Scarcella and Higa (1982) report an experimental study which compared child and adolescent second language learners who interacted with a native speaker on a block building task. Although the native speaker simplified language spoken to the younger learners, the older learners were more adept at managing the conversation to obtain more comprehensible input: they signaled their understanding better; they were more successful in keeping the conversation going; and they changed the conversation topic more proficiently.

Older learners from restricted-code backgrounds clearly have an advantage over younger learners in input management because their cultural background permits them to be more assertive and interactive. Most language minority children will not feel comfortable asking for the kinds of clarifications necessary to get comprehensible input. This puts these children at a clear disadvantage when compared to older learners and learners from elaborated-code backgrounds where explicitness and the search for it are valued.

CONCLUSION

A number of factors have been discussed here that may help us understand why language learners seem to have varying degrees of success at different age levels. Cognitive, sociocultural, affective, and input factors all may be a part of the explanation. Research is being actively conducted in these areas, and language educators who keep abreast of this research are more likely to devise effective systems for language teaching that are sensitive to the needs and potential of individual learners.

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